

### REMARKS

The Examiner's statement that there is no prior art impediment to allowance of all claims is noted with appreciation. The remaining matters are discussed below.

#### Response Period

The August 10 Action set a shortened response period of just 1 month. This is not believed warranted, as the Action included substantive new rejections of previously-examined claims – in addition to a restriction requirement. Nonetheless, to avoid further prolonging prosecution by contesting the matter, and to avoid paying extension fees, applicants have rushed to provide a substantive response within the one month period.

#### Traverse of Restriction Requirement

Claims 1-60 remain pending in the application. The Office has issued a late restriction requirement, and withdrawn claims 53-60 from consideration. The basis for the restriction requirement is that the new claims include “*processing said content data with a pseudo-random permutation function, to yield data having a substantially flat power spectral density.*”

The restriction requirement is respectfully traversed.

The limitation in claims 53-60 concerning the “spectral power density” being flat, was not newly inserted with claims 53-60. Such limitation has been included in the claims dating all the way back to the original filing of the application. The Examiner's attention is drawn to claim 3:

3. *A method as claimed in claim 1 or 2, wherein the pseudo-random function applied to the data block has a property of flattening the power spectral density of the data block.*

The same limitation is also found in claim 17.

Nor is the limitation, in claims 53-60, concerning a pseudo-random permutation function, new. See, e.g., the reference in the just-quoted claim 3 to “a pseudo-random function.”

See, also, original claim 13, which provides:

*13. (Original) A method as claimed in claim 1, wherein the pseudo-random reversible function is a permutation of the data block based on a keyed pseudo-random number generator.*

Thus, applicants respectfully submit that the language of claims 53-60 does not define an invention that is independent and distinct than already claimed. Withdrawal of the restriction requirement is solicited.

(If the restriction requirement is maintained and made final, the Examiner is authorized to cancel the restricted claims by Examiner's amendment. However, such action would prevent the Office from relying on the patent issuing from the present application in any rejection of the restricted-out claims in a subsequent application. See, e.g., 35 USC § 121. Thus, for example, such claims in a second patent could not be rejected on obviousness-type double patenting grounds over claims 1-52 of the present filing.)

#### Section 112

Claims 53-60 stand rejected under § 112 because the term "substantially flat spectral density" is said to be indefinite.

Applicants respectfully submit that such terminology is not indefinite to an artisan in the signal processing field. Indeed, many patents have been granted with such claim limitations.

See, for example, patent 5,406,067, which was granted with the following claim:

*12. The electrically adjusted mosaic filter as recited in claim 1 wherein the summed outputs from the summing means produces a **substantially flat spectral response** over a spectral region from 450 nm to 950 nm.*

See, also, patent 5,617,507, claim 8 of which was granted with the following limitation:

*deconvolving the voice speech signal, with an impulse response that is representative of the set of spectral envelope parameters, into a pitch pulse train signal having a **substantially flat spectral envelope** and a sequence of periodically located pitch pulses;*

See, also, patent 5,767,980, which was granted with the following claim:

*19. A device as defined in claim 1 wherein the calibration target has a **substantially flat spectral reflectance curve** at least in a wavelength range from approximately 400 nm to 1000 nm.*

See, also, patent 5,999,153, which was granted with the following claim:

*7. The display of claim 6, wherein the illumination source has a **substantially flat spectral characteristic curve**.*

See, also, patent 6,130,916, claim 1 of which was granted with the following limitation:

*d. pre-emphasizing the modulated pre-conditioned baseband data signal at the wireless transceiver to form a transmission data signal for transmission on the wireless channel, the transmission data signal having a **substantially flat spectral profile**;*

See, also, patent 6,298,186, which was granted with the following claim:

*2. A waveguide grating device according to claim 1 having a **spectral response that is substantially flat within a passband thereof**.*

See, also, patent 6,477,293, claim 1 of which was granted with the following limitation:

*(iv) optics means for spatially-modifying said WDM light beam, or said WDM light beam and each of said plurality of light beams, or each of*

*said plurality of light beams, by refocusing light beam components whose wavelengths are at extremes of the range about the centre wavelengths and defocusing light beam components whose wavelengths are closer to the centre wavelengths so as to achieve a **spectral intensity** across each port that is **substantially flat**.*

*See, also, patent 6,983,136, which was granted with the following claim:*

*13. The apparatus according to claim 12 further comprising: a switch for disconnecting a normal input to the filter, and connecting the filter to an input signal with a **substantially flat spectral density**.*

*See, also, patent 6,985,857, which was granted with the following claim:*

*11. The method of claim 10, wherein the synthesizing step includes using pitch periodic excitation trains with **substantially flat spectral response**.*

*See, also, patent 7,074,186, which was granted with the following claim:*

*26. The method of claim 15 wherein (c) comprises receiving with the signals having a **substantially flat spectral amplitude** throughout the bandwidth.*

These ten examples should serve to illustrate that – in the field of signal processing – reference to a “substantially flat” spectrum does not leave a claim indefinite. (Upon examining the supporting specifications of these patents, the Examiner will see that no definition of the term “substantially flat” is offered in any of these patents.)

Moreover, applicants’ specification provides guidance as to the meaning of this term. Referring to page 5, lines 21-25, content data that has been pseudo-randomized to have a “*substantially flat spectral density*” is characterized in that “each coefficient then generated by the [orthogonal] transform contributes substantially equally to the total energy of the block” – thereby allowing the process to be less sensitive, with regard to the

introduced distortion, to the selection of transform coefficients which are modified in the watermark insertion operation.

Accordingly, withdrawal of the § 112 rejections of claims 53-60 is respectfully solicited.

#### Section 101 Rejections

Claims 1, 15, 27, 37, 53 and 58 stand rejected under § 101 as allegedly drawn to non-statutory subject matter.

The rejections are respectfully traversed.

Reference is made to the *Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility*, published by the PTO in October, 2005.<sup>1</sup>

Each of the rejected claims produces a useful, concrete, and tangible result.

The claimed arrangements are “useful” for reasons detailed in the specification. For example, the claimed methods and apparatuses can be used with motion pictures, or other media, to prevent or discourage copying of the media data (*e.g.*, by marking the media data with a hidden “do not copy” watermark flag that is recognized and respected by compliant consumer electronic equipment). Or the methods/apparatuses can be used to invisibly convey watermark data with a media signal so as to identify the copyright holder (*e.g.*, Sony Pictures or The Walt Disney Company).

Regarding “concrete,” the Guidelines indicate that this test inquires as to whether a “result” can be assured, or whether the claimed arrangement yields an “irreproducible,” result. (In the latter case, a rejection under § 112, as calling for “undue experimentation” may be warranted.) In the present case, the claimed methods and apparatuses reliably operate to yield the desired watermarking results.

The result meets the “tangible” requirement because the result is practically applied; it is not a case where a process is disclosed with no practical application.

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<sup>1</sup> [http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101\\_20051026.pdf](http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf).

Accordingly, the claimed arrangements meet the requirements of § 101.

(If any § 101 rejection is renewed, the Office is invited to present a more thorough analysis in support thereof, so that the Board will not immediately reverse the rejection for failing to establish the *prima facie* requisites of the rejection. The conclusory rejection in the August 10 Action would seem susceptible to such a challenge.)

IDS

With the next communication, the Office is requested to return an initialed copy of the Information Disclosure Statement form that was filed in November, 2005. (Such a request was made in the last Response, but no initialed copy has been received. A copy of the un-initialed IDS is found in PAIR.)

Favorable reconsideration and passage to issuance are solicited.

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Respectfully submitted,

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